Sub: IGMC&RI – Quotation Call letter for various Equipments required for the department of ENT - Reg.

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The following items are proposed to be procured for this Institution. It is therefore requested to quote the lowest rate for the supply of the same in prescribed format (Annexure). The quotation shall be submitted by Hard copy (As per Circular dated: 31-10-2015) to the Director, IGMC&RI, Puducherry on or before 30th September 2016

<table>
<thead>
<tr>
<th>Sl.</th>
<th>Equipments name</th>
<th>Approx. Reqd.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>FLEXIBLE NASOPHARNGOLARYNGOSCOPE &amp; ACCESSORIES</td>
<td>1 No.</td>
</tr>
<tr>
<td>2</td>
<td>RIGID BRONCHOSCOPE</td>
<td>1 Set</td>
</tr>
<tr>
<td>3</td>
<td>RIGID ESOPHAGOOGOSCOPE Adult &amp; Paediatric</td>
<td>1 Set</td>
</tr>
<tr>
<td>4</td>
<td>SINUS ENDOSCOPY SET</td>
<td>1 Set</td>
</tr>
<tr>
<td>5</td>
<td>HIGH DEFINITION DIGITAL CAMERA</td>
<td>2 Nos.</td>
</tr>
<tr>
<td>6</td>
<td>MICRODEBRIDER</td>
<td>1 No.</td>
</tr>
<tr>
<td>7</td>
<td>NERVE STIMULATOR / MONITOR</td>
<td>2 Nos.</td>
</tr>
<tr>
<td>8</td>
<td>OTOACOUSTIC EMISSION</td>
<td>1 No.</td>
</tr>
<tr>
<td>9</td>
<td>BRAINSTEM EVOKEP RESPONSE AUDIOMETER</td>
<td>1 No.</td>
</tr>
<tr>
<td>10</td>
<td>IMMITANCE AUDIOMETER</td>
<td>1 No.</td>
</tr>
<tr>
<td>11</td>
<td>TEMPORAL BONE LAB</td>
<td>1 No.</td>
</tr>
<tr>
<td>12</td>
<td>ENDO DCR SET</td>
<td>4 Sets</td>
</tr>
<tr>
<td>13</td>
<td>DIRECT LARYNGOSCOPY SET &amp; ACCESSOREIS</td>
<td>3 Sets</td>
</tr>
<tr>
<td>14</td>
<td>BULL’S EYE LAMP</td>
<td>10 Nos.</td>
</tr>
<tr>
<td>15</td>
<td>SUCTION APPARATUS FOR ENT</td>
<td>10 Nos.</td>
</tr>
</tbody>
</table>

Encl.: Specification

Terms and conditions:
1. The supplier should be responsible until the items arrived to this Institution in good condition
2. The rates once quoted and approved will be final and no revision in rates will be allowed
3. Supply should be made within 15 days from the date of receipt of our supply order
4. Delivery should be made on FOR, Puducherry, door delivery basis.
5. The quotation should be based strictly on the specification.
6. Prices should be inclusive of all taxes.
7. The material should be supplied strictly in accordance with the specifications mentioned. The items which are not conforming to the specifications should be taken back at their cost.

/ By Order /

[Signature]

ADMINISTRATIVE OFFICER
SPECIFICATIONS FOR ENT INSTRUMENTS

1. FLEXIBLE NASOPHARYNGOLARYNGOSCOPESCOPE AND ACCESSORIES – 1 NOS

A. Specifications
   1. Working length 340mm
   2. Tip deflection 180°/100°
   3. Field of view 75° to 95°.
   4. Depth of view up to 50mm.
   5. Leakage testing device.
   6. Direction of view 0°.
   7. Rigid distal diameter 4.8mm.
   8. Angle if view 100°.
   9. Instrument channel 1.5 mm approx.
   10. OD at tip 3.7mm approx.
   12. Biopsy forceps for above 1.0 mm dia, 60cm length
   13. Grasping forceps for above 1.0 mm dia, 60cm length
   14. Cleaning brush

B. ACCESSORIES
   I. Suction apparatus
      a. Should have own motor mini cabinet- Standard Model Powder coated with SS top.
      b. Should have wheels for shifting
      c. Should generate a suction pressure of -600 mm Hg, at 45 ltrs/min
      d. Should have an electric diaphragm type pump
      e. Should have 2x2 Ltr PC jar for collection
      f. Should have an autoclavable or reusable bacterial filter
      g. Should have tubing of 10 mm ID x 2 mtr (PVC)
      h. Should have a vacuum gauge (0-760 mm Hg)
      i. Should have noise level of 55 dB A+ 3
      j. Should have net weight of 15 kg approx.
      k. Should have an overflow safety mechanism
      l. Should have a power supply of 220 V AC, 50/60 HZ 90 WATT
      m. Should be CE / IEC certified
   II. Patient unit
      a. The patient chair Should have electrical/hydraulic height adjustment.
      b. Should have a lift of 20cm, with foot switch remote Control.
      c. The upper part should be easily all round swiveling And fixable by an arresting brake.
      d. Should have tall back rest. Adjustable forward beyond the vertical line: Backwards decline slightly more than the Horizontal line without any special assistance.
e. From the back rest to the foot support the chair should be quickly changed into a long and solid couch.

f. The arm rests, made of resistant polyurethane, should be separately swiveled off backwards.

III. Revolving chair for surgeon – 1 nos
   a. The back rest should be C shaped.
   b. Both back rest and seat should be cushioned.
   c. Should be height adjustable.
   d. Should have a swivel of 360 degree.
   e. Should have sturdy wheels for moving on all sides

2. RIGID BRONCHOSCOPE – 2 NOS

1. RIGID VENTILATING BRONCHOSCOPIES
   ADULT
   A. 6.5 size 43cm length 2NOS
   B. 7.5 size 43cm length 2NOS
   C. 8.5 size 43 cm length 2NOS
   PEDIATRIC
   A. 3 size 26cm length 2NOS
   B. 3.5 size 26cm length 2NOS
   C. 3.7 size 30cm length 2NOS
   D. 4.5 size 30cm length 2NOS
   E. 6.0 size 30cm length 2NOS

2. TELESCOPES FOR USE WITH RIGID BRONCHOSCOPE
   A. FORWARD OBLIQUE 30° 2.9mm dia, autoclavable for use with 30 cm pediatric bronchoscope 1NOS

3. FORCEPS FOR RIGID BRONCHOSCOPY
   A. COIN FORCEPS for above mentioned pediatric and adult bronchoscope 2NOS
   B. ALLIGATOR FORCEPS, double action jaw, 2.5mm, 50cm working length 3NOS
   C. PEANUT GRASPING, double action jaw, 2.5mm, 50cm working length 3NOS
   D. CIRCULAR CUP BIOPSY FORCEPS, double action jaw, 2.5mm, 50cm working length 3NOS
   E. ALLIGATOR FORCEPS, double action jaw, 1.5mm, 35cm working length 3NOS
   F. PEANUT GRASPING, double action jaw, 1.5mm, 35cm working length 3NOS
   G. CIRCULAR CUP BIOPSY FORCEPS, double action jaw, 1.5mm, 35cm working length 3NOS
   H. FENESTRATED FORCEPS FOR SOFT FOREIGN BODIES, Working Length 35cm 3NOS
   I. UNIVERSAL FORCEPS, Working length 35cm 3NOS
   J. UNIVERSAL FORCEPS, Working length 50cm 3NOS

4. ACCESSORIES FOR BRONCHOSCOPY
   a) FLUVOG ADAPTOR, sliding glass window plug, sealing cap, notched lens, movable for above adult and pediatric bronchosopes -2NOS
   b) INJECTION CANNULA for positive pressure assisted ventilation, OD 3.5mm -2NOS
c) SEALING PLUGS for respiratory connector  
   -4NOS

d) GLASS WINDOW PLUGS  
   -4NOS

e) ADAPTORS for connection to ventilators  
   -4NOS

f) LARYNGEAL SYRINGE, 5cc with canula  
   -3NOS

g) IRRIGATOR AND ASPIRATOR  
   -4NOS

h) SPONGE HOLDER  
   length 35 cm  
   -2 NOS

i) FOREIGN BODY BASKET, 35cm length  
   -2NOS

j) FLEXIBLE BRUSH FOR CYTOLOGY  
   -2NOS

k) SUCTION TUBES, RIGID, 4mm diameter, 50cm length  
   -5NOS

l) SUCTION TUBES, RIGID, 2.7mm dia, 35cm length  
   -5NOS

m) COAGULATION SUCTION TUBES, insulated 50cm length  
   -3NOS

n) SUCTION APPARATUS  
   - 1 NOS

1. Should have own motor mini cabinet- Standard Model Powder coated with SS top.
2. Should have wheels for shifting
3. Should generate a suction pressure of -600 mm Hg, at 45 ltrs/min
4. Should have an electric diaphragm type pump
5. Should have 2x2 Ltr PC jar for collection
6. Should have an autoclavable or reusable bacterial filter
7. Should have tubing of 10 mm ID x 2 mtr (PVC)
8. Should have a vaccum guage (0-760 mm Hg)
9. Should have noise level of 55 dB A+ 3
10. Should have net weight of 15 kg approx.
11. Should have an overflow safety mechanism
12. Should have a power supply of 220 V AC, 50/60 HZ 90 WATT
13. Should be CE / IEC certified

o) REVOLVING CHAIR WITH BACK SUPPORT FOR SURGEON FOR BRONCHOSCOPY  
   - 1 NOS

1. The back rest should be C shaped.
2. Both back rest and seat should be cushioned.
3. Should be height adjustable.
4. Should have a swivel of 360 degree.
5. Should have sturdy wheels for moving on all sides

3. RIGID ESOPHAGOSCOPE adult & pediatric

A. SPECIFICATIONS

1. RIGID OESOPHAGOSCOPE; ROBERT JESBERG type with Fibre optic light carrier for distal illumination, stainless steel.
   Sizes;  
   - 2 NOS EACH
   50cm, 12x16mm
   50cm, 10x14mm
   45cm, 19x14mm
   45cm, 8x12mm
   30cm, 7x10mm
   30cm, 8x12mm
30cm, 10x14mm

B. ACCESSORIES

1. FORCEPS FOR OESOPHAGOSCOPE: – 3 NOS EACH
   a. working length 55cm, diameter 2.5mm
      1. Alligator
      2. Universal grasping
      3. Circular cup
      4. Peanut grasping forceps
   b. working length 35cm, dia 2mm.
      1. Alligator
      2. Universal grasping
      3. Circular cup
      4. Peanut grasping forceps

2. SUCTION APPARATUS – 1 NOS
   a. Should have own motor mini cabinet- Standard Model Powder coated with SS top.
   b. Should have wheels for shifting
   c. Should generate a suction pressure of -600 mm Hg, at 45 ltrs/min
   d. Should have an electric diaphragm type pump
   e. Should have 2x2 Ltr PC jar for collection
   f. Should have an autoclavable or reusable bacterial filter
   g. Should have tubing of 10 mm ID x 2 mtr (PVC)
   h. Should have a vacuum guage (0-760 mm Hg)
   i. Should have noise level of 55 dB A+ 3
   j. Should have net weight of 15 kg approx.
   k. Should have an overflow safety mechanism
   l. Should have a power supply of 220 V AC, 50/60 HZ 90 WATT
   m. Should be CE / IEC certified

3. SUCTION TUBES FOR USE WITH RIGID OESOPHAGOSCOPE: (3 NOS each)
   a. METALLIC, 55cm length.
   b. METALLIC, 35cm length

4. DENTURE CUTTING FORCEPS. Working Length 55cm.

5. GUM ELASTIC BOUGIES-Sizes: ONE SET OF ALL SIZES.

6. REVOLVING CHAIR WITH BACK SUPPORT FOR SURGEON FOR ESOPHAGOSCOPY – 1 NOS
   a. The back rest should be C shaped.
   b. Both back rest and seat should be cushioned.
   c. Should be height adjustable.
   d. Should have a swivel of 360 degree.
   e. Should have sturdy wheels for moving on all sides
4. **SINUS ENDOCOSPY SET**

1. **ADULT NASAL ENDOSCOPE (1 nos each)**
   a) 4mm, 18cm length, 0°, autoclavable with color code, fiber optic light transmission incorporated. Wide angle straight forward.
   b) 4mm, 18cm length, 30°, autoclavable with color code, fiber optic light transmission incorporated. Wide angle forward oblique lateral.
   c) 4mm, 18cm length, 70°, autoclavable with color code, fiber optic light transmission incorporated.

2. **STRAIGHT FORWARD ENDOSCOPE**:
   Forward oblique telescope 30°, diameter 3mm, length 6cm, autoclavable, with fiber optic light transmission incorporated, color code red. 1 nos

3. **ACCESSORIES FOR NASAL ENDOSCOPES**
   a) Stamberger telescope handle, round, 15 cm length for use with 4mm Telescopes. - 3 nos
   b) Protection tube-sheath for each telescope: length 11cm approx. - 4 nos
   c) Endoscope camera with processor (specifications given below)
   d) Color Monitor 21” LED Monitor, Flat screen, high definition, with HDMI Port and USB port

4. **PORTABLE LIGHT SOURCE WITHOUT CABLE FOR RIGID NASAL ENDOSCOPE (RECHARGEABLE BATTERY LIGHT SOURCE)** - 2 Nos
   a) Should have a light regulator, 17 cm.
   b) Should be attachable to all standard nasal endoscopes.
   c) Should have a Stainless steel body which is easy to clean.
   d) Should be light weight and ergonomically designed.

5. **Specifications for endoscope camera for sinus surgeries - 1 nos (serial no. 3c)**
   **Camera Head**
   a) Single chip Digital
   b) PAL & NTSC Color systems
   c) High Resolution
   d) F: 25-50
   e) Integrated zoom lens
   f) Should be adaptable to all ENT Operating microscopes, rigid optic Nasal endoscopes & Fiber optic nasopharyngoscope
   g) Autoclavable
   h) Should be light weight – not more than 800 gms.

6. **Camera Control Unit**
   a. With integrated digital image processing
   b. Serial digital Interphase(SDI)
   c. Digital Video(DV)
   d. Connecting Cables and other standard accessories
   e. Should be Laptop compatible

7. **CABINET – 2 nos**
   a. A cabinet movable with sturdy rollable wheels with lock facility should be provided for keeping Monitor, light source Camera Control Unit, Recording System and Accessories.
5. **HIGH DEFINITION DIGITAL CAMERA – 1 NOS**

A. **Camera Head**
   1. Single chip Digital camera
   2. PAL & NTSC Color systems
   3. High Resolution (>750 lines)
   4. F: 25-50
   5. Integrated zoom lens
   7. Adaptable to Operating microscopes, Nasal endoscopes & Fiberscope.
   8. Autoclavable
   9. Should be light weight

B. **Camera Control Unit**
   1. With integrated digital image processing
   2. Serial digital Interphase(SDI)
   3. Digital Video(DV)
   4. Connecting Cables and other standard accessories

C. **Color Monitor**
   1. Medical Monitor, Flat screen, Computer Compatible.

6. **MICRODEBRIDER – 1 NOS**

A. **CONSOLE**
   1. Should be a versatile powered ENT system, that lets to choose just the power required for various ENT and Head & Neck surgeries.
   2. Should have straightforward function selection key with optimal user interface.
   3. Should have an optimal color display for operating elements which are single and clear to read.
   4. Should have the capacity to store the settings of last session.
   5. Should be able to operate different kinds of Hand pieces (sinus shaver, microdebrider, high speed drills, microsaws, intradrill & Stapes drill).
   6. Should have soft start function and formulated error messages.
   7. Should have inbuilt adjustable irrigation control with cooling pump for high speed drills.
   8. The system should have multi-function two pedal foot switch capable of operating in both ON/OFF mode and Accelerator mode.
   9. The system should have the parameters to adjust from the control panel and the display should suggest operating parameters for a variety of ENT procedures.
   10. The system should be suitable for wide variety of procedures ranging from frontal sinusotomies, maxillectomy and other skull base surgeries to ultra-low speed oscillation for delicate airway cases.

B. **DEBRIDER HANDPIECE**
   1. Should have a powerful motor with absolutely silent and smooth running.
   2. Should have ergonomic design and should be light weight
   3. Should have Titanium body to avoid rusting.
   4. Should have variable handle allowing usage with various handpieces.
5. Should have straight suction path to reduce clogging and allow efficient tissue removal.
6. Should have integrated blade locking system to lock the blade tip rotation.
7. Should have integrated side grooves and cable clips to provide better tubing management.
8. Should have fingertip control to rotate only the tip of the blade up to 360 degree.
9. Should be able work up to the speed of 12000 RPM in forward rotation and 5000 RPM in oscillation mode.
10. The debrider Hand piece should be capable of accepting various types of blades and burs.
11. Should have different varieties of debrider Blades like straight, Curved blades like 12, 40, 60, 120 degree etc.
12. Should have rotatable laryngeal blades from 2.9 mm – 3.5 mm & 4 mm. Length from 18 cm, 22 cm, 22.5 cm, 27 cm & 27.5 cm.
13. Should have tonsillectomy and Adenoidectomy blades.
14. Should have rotatable subglottic, tracheal, bronchial blades.

C. INTRADRILL HANDPIECE
1. The body should be lightweight with ergonomic design.
2. Should have a titanium body to avoid rusting.
3. Should have a tool free opening and closing function.
4. Should have free rotation to both right and left side.
5. Should have smooth running with no vibration while operating.
6. Should have detachable irrigation tubes.
7. Should have a rotation speed ranging from 40,000 rpm to 80,000 rpm.
8. Should have easy and hygienic processing suitable for machine washing and autoclaving.

D. MICROMOTOR HANDPIECE
1. Should have small dimensions.
2. Should have a titanium body to avoid rusting.
3. Should have a brushless high speed motor.
4. Should have the capacity to adjust the number of rotations continuously.
5. Should have a rotation speed ranging from 60,000 rpm to 1,00,000 rpm.
6. Should have easy and hygienic processing suitable for machine washing and autoclaving.

E. SUCTION APPARATUS
1. Should have own motor mini cabinet- Standard Model Powder coated with SS top.
2. Should have wheels for shifting
3. Should generate a suction pressure of -600 mm Hg, at 45 ltrs/min
4. Should have an electric diaphragm type pump
5. Should have 2x2 Ltr PC jar for collection
6. Should have an autoclavable or reusable bacterial filter
7. Should have tubing of 10 mm ID x 2 mtr (PVC)
8. Should have a vacuum guage (0-760 mm Hg)
9. Should have noise level of 55 dB A ± 3
10. Should have net weight of 15 kg approx.
11. Should have an overflow safety mechanism
12. Should have a power supply of 220 V AC, 50/60 Hz 90 WATT
13. Should be CE / IEC certified

7. NERVE STIMULATOR / MONITOR – 1 NOS
   a. Should have minimum of Eight Channel Monitoring
   b. Should be capable of monitoring cranial Motor Nerves III, IV, V, VI, VII, IX, X, XI and XII.
   c. EMG signal must have audio and video representation.
   d. The equipment should be designed for ease of use with electrode placement screen displayed on the main unit for easy and faster electrode placement.
   e. Should monitor simultaneously during bipolar cautery.
   f. Should have high sensitivity with reduced interference.
   g. Should have artifact detection feature to distinguish between artifact and EMG signals.
   h. Should have option of surgeon mini screen to display monitoring information on a small screen.
   i. Should have high input sensitivity with reduced interference.
   j. Should have frequency response of 100-2000 Hz.
   k. Preamplifier gain should be at least 107 ± 4 dB.
   l. Should have constant current type stimulator.
   m. Should have capability of deliver current from 0.00 mA to 30 mA
   n. Should be able to adjust the stimulation range by the lowest stimulation current that can be delivered.
   o. Should have incrementing probe to adjust stimulation level
   p. Stimulating mono polar and bipolar probes should be available.
   q. Should be able to save and load custom setting with quick setup.
   r. Should be able to log EMG activity throughout a procedure for records.
   s. Should have color coded channel labeling for easy identification & use.
   t. Should have USB port for connection with mass storage devices including compact flash drive.
   u. Should give audio for use with headphone.
   v. The monitor should continuously measure electrode impedance and warning should be displayed when out of range.
   w. Preferable to have option of Patient Simulator of training and education.
   x. Consumable for 2 and 4 channels each along with stimulating probe should be quoted.
   y. Equipment should be of high Quality with excellent repute

8. OTOACOUSTIC EMISSION -1 NOS

A. Technical Specification for OAE
   1. Test Types: Distortion Product Otoacoustic Emissions, Spontaneous OAE, Input/Output DPOAE
   2. Reports: Color, Black/White or PDF
      DPOAE Stimulus Tones:
   3. Should have the Frequency range : 500 – 12, 000 Hz
4. Level: 20 – 80 dB SPL, in 5 dB steps
5. Should have an Accuracy of ± 3 dB
6. Should have a Harmonic Distortion: < 1.8% at 80 dB SPL, IEC 711 coupler, 500 – 12,000 Hz
7. Should have a Dynamic Range of 85 dB SPL, IEC 711 coupler, 500-12,000 Hz, F1 & F2 = 65 dB SPL
8. Should have the following Octave Ranges: 500-1000, 1000-2000, 2000-4000, 4000-8000, 8000-12000 Hz
9. Points per Octave: 1 – 12 points
10. F2/F1 Ratio: 1.1 – 1.8
11. Test Time: Varies, depending on test parameters, environment, and scoring options

B. Status Indicators:
   Probe LED:
   1. Green solid – test in progress
   2. Yellow solid – seal check in progress
   3. Yellow flashing – test stopped, probe problem/ seal check failed

C. Power Supply
   1. Should have Power input to be 220-240VAC, 50Hz fitted with Indian plug
   2. Should have a Suitable UPS with maintenance free batteries.

9. BRAINSTEM EVOKE RESPONSE AUDIOMETER – 1 NOS

A. Technical Specification for BERA
   1. Should have 2 channels
   2. Transducer type: Ear-Tone ABR insert phone
   3. Should have ability to record under physiological and electromagnetic noises
   4. Impedance measurement should be built in and displayed on screen.
   5. Should have facilities for PC interface through necessary software.
   6. Should have independent signal generation for each channel
   7. Signal presentation: right, left and both
   8. Should have pre-programmed auto tests
   9. Should have Stimulus Types of Click, tone burst, tone pip
   10. Should have a Stimulus Polarity of Condensation, Rarefaction and Alternating
   11. Masking Types: Absolute or stimulus relative
   12. Should have an Intensity range from 0 to 130 dB SPL
   13. Repetition rates: 0.2 – 100 depending on modality
   14. Should have a Filter settings of 30–1500 Hz bandwidth
   15. High Pass Filtering: RC or Digital Butterworth
   16. Low Pass Filtering: Butterworth or Digital linear phase
   17. Tone Burst 10 to 120 dB on 250 to 8000 Hz
   18. Analysis time should be short
   19. Should be able to test multiple frequencies simultaneously for both ears
   20. Automatic Generation of Audiogram in SPL/ HL
   21. Phasor diagram should be generated automatically.
   22. Frequency and intensity based phasor diagram.
   23. FFT Values should be displayed
   24. Should have spectrum graph
10. TYPANOMETER / IMMITANCE Audiometer – 1 NOS

A. Impedance:
1. Should have Probe Tone Frequency of 226 Hz ±1%
2. Should have High Freq. Probe Tones of 678, 800 and 1000 Hz.
3. Should have Probe Tone Intensity of 85 dB SPL ±1.5 dB
4. Should have a Pressure Range of +300 to -600 daPa
5. Accuracy should be of ±5% or ±10 daPa
6. Should have a Compliance Range of 0.1-6 ml.
7. Should have Compliance Accuracy of ±5% or 0.1 ml.

B. Reflex:
1. Should have Manual or automatic testing facility with 18 stimuli to each ear.
2. Should have facilities for Auto Reflex Detection and Multiple Reflex stimulation.
3. Stimulus Duration should be of 1.0 sec.
4. Reflex Acceptance should be Adjustable between 2% and 6%, or 0.05 – 0.15 ml change of ear canal volume.
5. Ipsil Frequencies: 500, 1000, 2000, 3000, 4000 Hz, wide band, high and low pass.
6. Intensity (Max.): 100, 105, 110 dBHL.
7. Contra Frequencies: 250, 500, 1000, 2000, 3000, 4000, 6000, 8000 Hz, wide band, high and low pass.
8. Intensity (Max.): 90, 100, 120, dBHL.

C. Reflex Decay:
1. Stimulus Duration should be of 10 sec.

D. Audiometer:
Frequencies Hz: Intensities dBHL:
125 -10 to 90
250 -10 to 90
500 -10 to 120
1000 -10 to 120
2000 -10 to 120
3000 -10 to 120
4000 -10 to 120
6000 -10 to 120
8000 -10 to 110
1. Should have Auto Threshold determination (Modified Hughson Westlake)
2. Should have facility to connect to computer for recording, monitoring and printing via USB ports.
3. Should have an LCD display of tympanogram.
4. Standard company laptop with the necessary software should be provided with the apparatus.

E. Technical data
Tymanometry mode:
1. Should have the Probe frequency, intensity 226 Hz ± 1%, 85 dB SPL into 2 cm3
2. Should have the High Probe freq. MI 34 H 1 kHz ± 1%
3. Should have the Pressure range +200 to -400 daPa
4. Should have a compliance range 0.1 to 6.0 ml
5. Should have an Accuracy of ± 5% or ± 10 daPa
6. Test time is < 3 seconds
7. Reflex Mode: 226 Hz
8. Should have the following frequencies 500, 1000, 2000, 4000 Hz ± 2%
9. Test method ipsilateral, contralateral
10. Intensities ipsilateral 70 ... 105 dB HL
11. Intensities contralateral 70 ... 120 dB HL with TDH 39 contra phone
12. Ipsilateral reflex test: with AGC
13. Intensity setting: automatic or manual

F. REFLEX DECAY MODE:
1. Test time 13 sec., 10 sec. auto tone present

G. EUSTACHIAN TUBE MODE:
1. Should have the Pressure range +300 to -400 daPa

II. GENERAL:
1. Standard: IEC 601-1, IEC 645-5 class 2, medical directive 93/42/EEC
2. Test program: Reflex test selectable
3. Memory: Storage of test results for both ears
4. Menu: For adapting to individual needs (Pump speed, accuracy, reflex mode etc.)
5. Probe: Lightweight adjustable hand-held probe with built-in control light and switch
6. Printer: fast, virtually silent thermal printer
7. Print time: 4 s / 12 s (Test results of both ears)
8. Display: Graphic LCD-Display, contrast adjustable
9. PC-interface: USB
10. Power supply: Mains 100 ... 240 V~, 50/60 Hz, 25 VA
11. Dimension and weight: W x D x H: 39 x 29 x 11 cm / 2,6 kg
12. Graphical realtime display

I. ACCESSORIES / DISPOSABLES
1. Carrying case
2. Soft-side carrying case
3. Printer paper 10 roll
4. 1 set of Eartips yellow (7 mm) 10 pcs.
5. 1 set of Eartips green (9 mm) 10 pcs.
6. 1 set of Eartips white (11 mm) 10 pcs.
7. 1 set of Eartips yellow (13 mm) 10 pcs.
8. 1 set of Eartips green (15 mm) 10 pcs.
9. 1 set of Eartips blue (18 mm) 10 pcs.

11. TEMPORAL BONE LAB

A. MICROSCOPE – 1 NOS
1. Binocular tubes: Straight head
2. Eyepieces: WF 10X/18 mm with eye guards, diopter adjustment ± 5 mm
3. Optional: WF 12.5X/18 mm
4. Apochromatic magnichanger: 0.6X, 1.0X, 1.6X
5. Objective: NuVar system with focal length adjustment from 300-400 mm
6. Options: f=250 mm; f=300 mm; f=400 mm; manual fine focus, f=200 mm (Fixed objective Lens), objective lens protector
7. Light source: 27W LED-75K LUX
8. Built-in filters: Green or Yellow
9. Vertical movement of arm: + 250 (500 mm) with power saver light cut-off at park position
10. Microscope carriers: + 155 deg
11. Should have provision for C mount adapter for connecting to camera for teaching purposes

B. TEMPORAL BONE CONSOLE – 1NOS
C. TEMPORAL BONE HOLDERS – 2 NOS
D. MICROMOTOR DRILL WITH HANDPEICE – 2 NOS
   1. Should have a brushless high speed motor.
   2. Should have the capacity to adjust the number of rotations continuously.
   3. Should have a rotation speed ranging from 60,000 rpm to 1,00,000 rpm.
   4. Should have easy and hygienic processing suitable for machine washing and autoclaving.
E. BURRS OF VARIOUS SIZES
   1. Standard Straight Burrs-
      a. CUTTING Type: Set of Dia 0.6mm to 7mm, Length 7cm - 3 sets
   2. Diamond Burrs (Polishing)
      1. STRAIGHT SHAFT: Set of Dia 0.6 to 7mm, Length 7cm -3 sets
   3. Oblong Burrs,
      1. CUTTING: Set of Dia 1.5mm,1mm,5mm,6mm,7mm,Length 7cm -2 sets
   4. Rack For Burrs
      1. With lid, Sterilizable. To accommodate 40 burrs with 7cm shaft -4nos
F. REVOLVING CHAIR WITH BACK SUPPORT – 1 NOS
   1. The back rest should be C shaped.
   2. Both back rest and seat should be cushioned.
   3. Should be height adjustable.
   4. Should have a swivel of 360 degree.
   5. Should have sturdy wheels for moving on all sides
G. SUCTION APPARATUS – 1 NOS
   1. Should have own motor mini cabinet- Standard Model Powder coated with SS top.
   2. Should have wheels for shifting
   3. Should generate a suction pressure of -600 mm Hg, at 45 ltrs/min
   4. Should have an electric diaphragm type pump
   5. Should have 2x2 Ltr PC jar for collection
   6. Should have an autoclavable or reusable bacterial filter
   7. Should have tubing of 10 mm ID x 2 mtr (PVC)
   8. Should have a vacuum guage (0-760 mm Hg)
   9. Should have noise level of 55 dB A+ 3
   10. Should have net weight of 15 kg approx.
   11. Should have an overflow safety mechanism
   12. Should have a power supply of220 V AC, 50/60 HZ 90 WATT
   13. Should be CE / IEC certified
### 12. ENDO DCR SET – 2NOS

<table>
<thead>
<tr>
<th>S.NO</th>
<th>NAME OF THE INSTRUMENT</th>
<th>QUANTITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>THRU CUTTING FORCEPS, STRAIGHT</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>THRU CUTTING FORCEPS 45 DEGREE</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>BONE PUNCH DOUBLE ACTION</td>
<td>2</td>
</tr>
<tr>
<td>4</td>
<td>BLAKESLEY SCISSORS STRAIGHT</td>
<td>2</td>
</tr>
<tr>
<td>5</td>
<td>BLAKESLEY SCISSORS 45 DEGREE</td>
<td>2</td>
</tr>
<tr>
<td>6</td>
<td>SICKLE KNIFE</td>
<td>4</td>
</tr>
<tr>
<td>7</td>
<td>DCR PUNCH UP TURN OF DIFFERENT SIZES</td>
<td>2</td>
</tr>
<tr>
<td>8</td>
<td>ROUND KNIFE ANGLED 45 DEGREE, DIA 2MM</td>
<td>4</td>
</tr>
<tr>
<td>9</td>
<td>PERIOSTEAL ELEVATORS SHARP CURVED RIGHT</td>
<td>4</td>
</tr>
<tr>
<td>10</td>
<td>PERIOSTEAL ELEVATORS SHARP CURVED LEFT</td>
<td>4</td>
</tr>
<tr>
<td>11</td>
<td>PERIOSTEAL ELEVATORS STRAIGHT</td>
<td>4</td>
</tr>
<tr>
<td>12</td>
<td>CURETTE SMALL, STRAIGHT</td>
<td>2</td>
</tr>
<tr>
<td>13</td>
<td>BOWMANN LACRIMAL PROBE, SET OF 4 PCS, STANDARD DIFFERENT SIZES</td>
<td>2</td>
</tr>
<tr>
<td>14</td>
<td>LACRIMAL PUNCTUM DILATOR FOR LACRIMAL DUCT, SET OF 4</td>
<td>2</td>
</tr>
<tr>
<td>15</td>
<td>CAUTRY SICKLE KNIFE</td>
<td>2</td>
</tr>
<tr>
<td>16</td>
<td>KERRISONS BONE PUNCH 2MM ANGLED</td>
<td>2</td>
</tr>
<tr>
<td>17</td>
<td>KERRISONS BONE PUNCH 2MM STRAIGHT</td>
<td>2</td>
</tr>
<tr>
<td>18</td>
<td>BALL PROBE</td>
<td>2</td>
</tr>
<tr>
<td>19</td>
<td>HARTMANN NASAL DRESSING FORCEPS</td>
<td>4</td>
</tr>
<tr>
<td>20</td>
<td>NASAL SCISSORS STRAIGHT AND CURVED</td>
<td>4 EACH</td>
</tr>
<tr>
<td>21</td>
<td>BLAKESLEY ETHMOID FORCEPS, 45 AND 90 DEGREE</td>
<td>3 EACH</td>
</tr>
<tr>
<td>22</td>
<td>DCR KNIFE, STRAIGHT, LEFT AND RIGHT</td>
<td>2 EACH</td>
</tr>
<tr>
<td>23</td>
<td>CURVED NASAL SUCTION TIPS</td>
<td>4</td>
</tr>
<tr>
<td>24</td>
<td>SS INSTRUMENT TRAY</td>
<td>3</td>
</tr>
<tr>
<td>25</td>
<td>STERILIZATION BOX WITH DOUBLE MATTs FOR MINIMUM OF 10 INSTRUMENTS</td>
<td>2</td>
</tr>
<tr>
<td>26</td>
<td>MALLEABLE ZIRRAF FORCEP VERTICAL / HORIZONTAL OPENING</td>
<td>2 EACH</td>
</tr>
<tr>
<td>27</td>
<td>MALLEABLE SUCTION CUM ELEVATOR WITH CAUTRY</td>
<td>4</td>
</tr>
<tr>
<td>28</td>
<td>BIPOLAR FORCEPS BAYONET SHAPED WITH SUCTION PORT</td>
<td>2</td>
</tr>
<tr>
<td>29</td>
<td>DORMIA BASKET</td>
<td>2</td>
</tr>
<tr>
<td>30</td>
<td>THUDICUM NASAL SPECULUM SET OF 4</td>
<td>2</td>
</tr>
<tr>
<td>31</td>
<td>KILLIAN SPECULUM SET OF 4</td>
<td>2</td>
</tr>
<tr>
<td>32</td>
<td>FREER DOUBLE SIDED SEPTAL ELEVATOR</td>
<td>2</td>
</tr>
<tr>
<td>33</td>
<td>ENDO-DCR STENTS</td>
<td>3</td>
</tr>
</tbody>
</table>
13. DIRECT LARYNGOSCOPY SET AND ACCESSORIES – 2 NOS

A. SPECIFICATIONS

1. RIGID LARYNGOSCOPE for adult, large, length 18cm, with fibreoptic carrier
2. RIGID LARYNGOSCOPE for adult, medium, length 18cm, with fibreoptic carrier
3. RIGID LARYNGOSCOPE for adult, small, length 18cm, with fibreoptic carrier
4. RIGID LARYNGOSCOPE for adolescent, length 14-16cm for use with 4mm, with fibreoptic carrier
5. RIGID LARYNGOSCOPE for children, length 12-14cm for use with 4mm, with fibreoptic carrier
6. RIECKER-KLIENSASSER LARYNGOSCOPE HOLDER WITH RING CHEST SUPPORT:
   Adult; 9.5 cm- ring size, 34cm rod length.
   Children; 9.5cm- ring size, 24cm rod length.
7. DIRECT RIGID DIAGNOSTIC LARYNGOSCOPE:
   Anterior commissure Kleinsasser with fiber optic light carrier
   i. Small ; 13cm.
   ii. Medium ; 15cm.
   iii. Large ; 18cm.
8. FORCEPS FOR LARYNGEAL SURGERY – 2 NOS EACH
   - Cutting forceps with round cup, curved-2mm, 23 cm long
   - Cutting forceps with round cup, curved-2mm, 18 cm long
   - Alligator forceps-23 cm long
   - Alligator forceps-18 cm long
   - Cutting forceps with round cup, straight-2mm, 23 cm long
   - Cutting forceps with round cup, straight-2mm, 18 cm long
   - Cutting forceps with round cup, curved upwards-2mm, 23 cm long
   - Cutting forceps with round cup, curved upwards-2mm, 18 cm long
   - Cutting forceps with round cup, curved right-2mm, 23 cm long
   - Cutting forceps with round cup, curved right-2mm, 18 cm long
   - Cutting forceps with round cup, curved left-2mm, 23 cm long
   - Cutting forceps with round cup, curved left-2mm, 18 cm long
   - Arnold vocal cord holding forceps, triangular jaws, for right side, 23 cm
   - Arnold vocal cord holding forceps, triangular jaws, for left side, 23 cm
   - Arnold vocal cord holding forceps, triangular jaws, for right side, 18 cm
   - Arnold vocal cord holding forceps, triangular jaws, for left side, 18 cm
   - Microlaryngeal scissors-23cm long, curved right
   - Micro laryngeal scissors-23cm long, curved left
   - Microlaryngeal scissors-23cm long, curved up
- Microlaryngeal scissors-23cm long, straight, horizontal cutting
- Micro laryngeal scissors-18cm long, curved left
- Microlaryngeal scissors-18cm long, curved up
- Microlaryngeal scissors-18cm long, straight, horizontal cutting
- Kleinsasser knife, sickle shaped, working length 23 cm
- Kleinsasser knife, sickle shaped, working length 18 cm
- Insulated suction and coagulation probe, length 23 cm, dia 3 mm
- Insulated suction and coagulation probe, length 18 cm, dia 3 mm
- Teeth protector, made of plastic, in large, medium, and small sizes for adult and pediatric patients
- Grasping forceps, delicate, serrated, working length 23 cm
- Grasping forceps, fenestrated, working length 23 cm
- Grasping forceps, delicate, serrated, working length 18 cm
- Grasping forceps, fenestrated, working length 18 cm
- Rigid Suction Tube, working length 23cm, 2.5mm dia – 3 nos each
- Rigid Suction Tube, working length 23cm, 4.0mm dia 3 nos each
- Rigid Suction Tube, working length 18cm, 2.5mm dia 3 nos each
- Rigid Suction Tube, working length 18cm, 4.0mm dia 3 nos each

B. ACCESSORIES

1. Suction apparatus - 1 NOS
   a. Should have own motor mini cabinet- Standard Model Powder coated with SS top.
   b. Should have wheels for shifting
   c. Should generate a suction pressure of -600 mm Hg, at 45 ltrs/min
   d. Should have an electric diaphragm type pump
   e. Should have 2x2 Ltr PC jar for collection
   f. Should have an autoclavable or reusable bacterial filter
   g. Should have tubing of 10 mm ID x 2 mtr (PVC)
   h. Should have a vacuum guage (0-760 mm Hg)
   i. Should have noise level of 55 dB A+ 3
   j. Should have net weight of 15 kg approx.
   k. Should have an overflow safety mechanism
   l. Should have a power supply of 220 V AC, 50/60 HZ 90 WATT
   m. Should be CE / IEC certified

14. BULL’S EYE LAMP – 10 NOS
   a) Should have a heavy base on which the complete device stands.
   b) A sliding arrangement which supports the lamp assembly and consists of upper half of an upright, and a ball and socket joint attached to an arm
   c) The main part of the device housing the lamp, condenser lens and reflectors, and upper and lower detachable parts of the lamp housing with ventilation holes.
d) Each part of the examination lamp shall be made from material of suitable strength and shall be suitably finished, consistent with the requirement of the store.

e) All metal parts shall preferably be nickel and chromium plated or shall be given any other suitable coating, shall be durable to resist discolouration, wear, rust and corrosion.

f) All unnecessary sharp edges shall be rounded off.

g) The lamp assembly shall be provided with a 240 volts, 100watt frosted lamp.

h) The condenser lens shall have minimum frek aperture of 60mm.

15. SUCTION APPARATUS FOR ENT – 8 NOS

a. Should have own motor mini cabinet- Standard Model Powder coated with SS top.

b. Should have wheels for shifting

c. Should generate a suction pressure of -600 mm Hg, at 45 ltrs/min

d. Should have an electric diaphragm type pump

e. Should have 2x2 Ltr PC jar for collection

f. Should have an autoclavable or reusable bacterial filter

g. Should have tubing of 10 mm ID x 2 mtr (PVC)

h. Should have a vacu um guage (0-760 mm Hg)

i. Should have noise level of 55 dB A+ 3

j. Should have net weight of 15 kg approx.

k. Should have an overflow safety mechanism

l. Should have a power supply of 220 V AC, 50/60 HZ 90 WATT

m. Should be CE / IEC certified

n. Warranty for minimum 1 yr